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Validity of the PATHS student evaluation as a universal screener: Utilization within a social-emotional response to intervention framework

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Validity of the PATHS Student Evaluation as a Universal Screener: Utilization within a
Social-Emotional Response to Intervention Framework

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Abstract

Student mental health is essential to academic functioning, with social-emotional competency being a specific area that is related to student success. A relatively new approach for addressing students' social-emotional competencies is Response to Intervention (RTI). Despite being widely utilized in the academic domain, a limited amount of research has been conducted on RTI in the social-emotional domain. The research that does exist lacks a standard approach for universal screening and identification of at-risk students. To address these shortcomings and the limitations of a public school system's implementation of RTI, the current study will investigate the validity of using the Promoting Alternative Thinking Strategies (PATHS) Student Evaluation as a universal screener, as well as, the possible relationships that exist between the three subscales included in the Student Evaluation. The study will utilize multiple Chi-square and correlation analyses to provide information regarding the validity of using the PATHS Student Evaluation as a universal screener.

Introduction

Statement of the Purpose

The current educational framework, based upon the guidelines set forth by No Child Left Behind (NCLB), emphasizes accountability to ensure that all students are successful and meeting academic proficiency (No Child Left Behind Act of 2001 [NCLB], 2008). NCLB guidelines state that all students should be provided equal opportunities to obtain high-quality education and the chance to achieve at his or her greatest potential. On the whole, these standards and the emphasis on accountability were implemented to increase students' academic achievements in elementary and secondary public schools. Although the primary focus of NCLB is on increasing academic success, a student's mental health may be a key element that influences academic performance (New Freedom Commission on Mental Health, 2003). With this in mind, it may be important when evaluating a student's academic performance to consider the state of that student's wellbeing (New Freedom Commission, 2003).

A particular area of mental health that influences students' general ability to function and perform within school is social-emotional competency (Snyder et al., 2010). Given this relationship, focusing on the social-emotional area of mental health may be specifically relevant and applicable in the schools. Although some schools may already have a program in place to address social-emotional competencies, for some students such a program may not be sufficient. A teacher referral or a large number of office disciplinary referrals may then be used to indicate a student who needs support beyond what a current program offers. By using this approach, schools must wait for students to fail socially or emotionally in order to be identified.

A possible framework that may be used to address the delayed identification of students who may have social-emotional concerns is RTI. Although there is a growing amount of research focusing on the effectiveness of using RTI for reading and mathematics, there is limited empirical support regarding its use to address and identify social-emotional concerns. Furthermore, the literature indicates that the RTI programs that have been implemented differ in their method for determining movement between tiers and for identifying students who may be at-risk. In addition, core components of RTI for academics, progress monitoring and graphing, have also been overlooked by research investigating RTI for the social-emotional domain.

Mental Health and Academic Success

Mental health is an essential component to one's overall health as it is part of the foundation for individual wellbeing and effective functioning (World Health Organization [WHO], 2010). According to the WHO (2010), "Mental health is a state of well-being in which an individual realizes his or her own abilities, can cope with normal stresses of life, can work productively and is able to make a contribution to his or her community." The idea that mental health is a key component of learning supports the need for schools to be more involved in providing mental health services. Moreover, research conducted by Greenberg et al., (2003) revealed that approximately 20% of youth experience difficulties with mental health over the course of a school year. Therefore, a significant number of students are enduring mental health problems while they attend school. Even though a large number of students experience mental health problems, about 80% do not receive the necessary intervention services to address these difficulties (Greenberg et al., 2003). Of the students who do receive mental health services, the

majority obtains interventions within the school (Foster et al., 2005). This pattern of receiving services may relate to the idea that schools are environments in which children spend the majority of his or her time; therefore, they may be convenient locations for children to receive mental health services (Zins, Bloodworth, Weissberg, & Walberg, 2004). Given the relationship between mental health and school performance, the pattern of receiving mental health services in schools, and the reportedly high rates of mental health problems among youth, schools appear to be an ideal environment for students to receive mental health services.

In addition to providing convenient access to services, schools also provide an environment for the early identification of students who may possess mental health concerns (New Freedom Commission, 2003). Early identification is important given that 50% of disorders affecting adolescents have early onsets: age 6 for anxiety, age 11 for behavioral disorders, age 13 for mood disorders, and age 15 for substance use problems (Merikangas et al., 2010). Furthermore, the rate of these disorders was found to increase as individuals progressed in age (Merikangas et al., 2010). By identifying mental health difficulties early, students may receive interventions and possibly avoid unnecessary struggles that could impact learning later in life (New Freedom Commission, 2003).

Elias, Schuyler, Branden-Muller, and Sayette (1991) revealed that by implementing early interventions to target social-emotional competencies, academic achievement was also enhanced and continued to positively influence school initiatives throughout students' academic careers. Specifically, the authors found that students who completed an intensive two year social competency program in elementary school demonstrated significantly higher academic achievement 4 to 6 years later than students

who did not complete the program. Although this supports the potential for long-term effectiveness of early interventions, solely providing early interventions may not be sufficient for every student's individual needs and circumstances (Elias et al., 1991). Ideally, schools should continue to provide supports and monitor students throughout their school career.

Social-Emotional Competencies

With the increased focus on academic success and the need to provide empirical evidence to validate initiatives implemented in the schools, research supporting mental health services in schools tends to focus on its association with academic achievement. A specific area of mental health that has been demonstrated to relate to success in school is the area of social-emotional competency (Synder et al., 2010). Individuals who are socially and emotionally competent possess a range of skills that contribute to their ability to function effectively not only in school, but throughout life. Some of these specific skills include the ability to recognize and manage emotions, establish positive relationships, make responsible decisions, and effectively manage difficult situations (Collaborative Academic, Social, and Emotional Learning [CASEL], 2007). Although these skills may be inherent to some, others may require specific instruction. This specific instruction is referred to as social-emotional learning (SEL) and a large portion of research supporting the relationship of social-emotional competency to school success is based on the outcome research of SEL programs. SEL programs are effective when implemented in a variety of regular education classroom settings with a range of different students (CASEL, 2007). More generally, outcome evidence from SEL programs

supports the important role of social and emotional skills for promoting student engagement, interest, and overall success in school (CASEL, 2007).

Schools are naturally social environments in which students engage with their peers and teachers in order to obtain information (Malecki & Elliott, 2002). Therefore, students who lack these social-emotional competencies may be less likely to succeed in school (Zins et al., 2004). According to Malecki and Elliot (2002), a student's social skills significantly influence their performance on reading, language, mathematics, and mathematical computation standardized tests.

Snyder et al. (2010) provides further support for the relationship between social-emotional competency and academic achievement. They found that schools implementing a social-emotional and character development program scored significantly better in reading and mathematics when compared to schools that did not receive this intervention (Synder et al., 2010). A possible explanation for this finding may relate to the increased amount of time that could be devoted to instruction rather than discipline in the classroom (Synder et al., 2010).

Behavioral change. In addition to impacting students' academic performance, interventions focusing on students' social-emotional competency have also been found to significantly reduce absenteeism and suspension rates (Synder et al, 2010). Although the authors included demographic variables in support of the social-emotional and character program, the data they obtained was not at a student or classroom level. That is to say, the demographic information they utilized did not correspond to the group that received the intervention. Despite this methodological issue, these findings provide support for the

more widespread influence that social-emotional competency may have on non-academic areas associated with school success.

Office disciplinary referrals, often used to identify students who may benefit from receiving interventions for social-emotional concerns, have been shown to reduce in number following the implementation of a social-emotional intervention (Fairbanks, Sugai, Guardino, & Lathrop, 2007). Even though the frequency of the office disciplinary referrals was found to decrease, it is important to note that the teachers' knowledge of the intervention and study may have influenced his or her tendency to refer students to the office (Fairbanks et al., 2007). Therefore, with any behavioral variable that is being measured for change, it is important to take into account the influence that being a participant has on a teacher's behavior.

Response to Intervention (RTI)

Although Response to Intervention (RTI) is typically used to address academic areas, RTI's emphasis on early identification and tiered intervention may also be applicable to the social-emotional domain. As part of the reauthorization of the Individuals with Disabilities Education Act (IDEA 2004), schools no longer have to wait for students to fail in order to provide interventions or services (Reschly & Hosp, 2004). Under IDEA 2004 states may now use RTI as a method for determining eligibility for special education services and to provide students with support.

Background. RTI is a multi-tiered model that uses data based decision-making to modify the research based interventions provided to students (Gresham, 2005). Developed to alter the refer-test-place mentality, RTI uses universal screening and progress monitoring to identify students who may need additional assistance outside the

interventions that are received by all students in the general education classroom. By screening all students and then identifying and monitoring students who may be at-risk, school personnel are able to determine a student's response to an intervention and make decisions regarding moving a student from one tier of services to the next (Pearce, 2009).

The majority of research on RTI has been conducted to support its utilization for reading and mathematics interventions, so the empirical support for utilizing RTI to identify students with social-emotional concerns is limited (Pavri, 2010; Fairbanks et al., 2007). The dearth of research relating to the use of RTI for identifying students with social-emotional concerns may relate to the general lack of implementation due to uncertainties expressed by school personnel. Some of the uncertainties reported by school personnel include concerns regarding a lack of resources, staff, and budget (Pavri, 2010). Further concerns relate to the need for an increased amount of professional development to implement RTI and an uncertainty regarding implementation at the high school level (Pavri, 2010). Despite the lack of empirical support and the concerns expressed about its implementation, RTI is an attractive model to school personnel because of its emphasis on early intervention, prevention, and potential positive impact on academic growth and self-esteem (Pavri, 2010).

RTI initiatives. Although RTI is a relatively novel framework for identifying and addressing social-emotional competency among students, a limited number of RTI programs have been implemented and empirically evaluated in the schools. A common characteristic among such programs is the use of increased levels of supports for students determined not to be adequately responding to interventions. Typically, Tier I interventions are provided to all the students in the form of school wide expectations,

rules, and/or a positive behavioral support system (Pavri, 2010; Pearce, 2009; Fairbanks et al., 2007). Office disciplinary referrals are then generally used to indicate whether or not students are responding to the universal interventions (Pavri, 2010; Pearce, 2009).

An office disciplinary referral occurs when a student violates a school rule and the incident is referred to administration for an official write-up of the event (Chafouleas, Briesch, & Riley-Tillman, 2010). This data is typically already available and easily accessible within a system, so it allows for a convenient method of determining students who may need additional assistance (Chafouleas, Briesch, & Riley-Tillman, 2010). Although office disciplinary referrals are frequently used to indicate unresponsiveness, programs vary as to how they utilize the information to determine whether or not a student is responding to interventions. For instance, Pearce (2009) used a specific criterion of four office disciplinary referrals. Another method used is a discrepancy ratio, which compares a student's number of office disciplinary referrals to his or her peers' average number of office disciplinary referrals (Chafouleas, Briesch, & Riley-Tillman, 2010). With the discrepancy ratio method, if a student has two times as many office disciplinary referrals as their peers, it is considered by the school to be a significant discrepancy (Chafouleas, Briesch, & Riley-Tillman, 2010). Office disciplinary referrals have also been collected at the classroom level and used to identify classrooms with elevated levels of referrals (Fairbanks et al., 2007).

In addition to taking into account the number of office disciplinary referrals a student receives, classroom teachers, special education teachers, and principals are often consulted to identify students requiring additional social-emotional interventions (Pavri, 2010; Pearce, 2009). As with the office disciplinary referrals, programs vary in how they

utilize consultation with teachers. In Pearce (2009), teachers and principals were interviewed to determine whether a student's behaviors warranted additional intervention after a student was identified as at-risk through office disciplinary referrals. Conversely, in Fairbanks et al. (2007), teacher referrals were used as the sole method of identifying students needing additional support.

Despite utilizing a common RTI model, research investigating the effectiveness of using a RTI framework for addressing the social-emotional domain is varied in its methodology and implementation. The most profound difference between the reviewed studies was the variability in methods for determining lack of responsiveness to a Tier I intervention. A possible approach to more effectively implement and evaluate the effectiveness of RTI in the social-emotional domain may be to implement a standardized assessment system (Pavri, 2010). A standardized assessment system may include a universal screener that would provide a consistent criterion for determining students who may be at-risk and allow for better comparison of research studies assessing effectiveness.

Promoting Alternative Thinking Strategies (PATHS)

Developed by Greenberg and Kusché (1993), The Promoting Alternative Thinking Strategies (PATHS) program is an example of a universal social-emotional learning curriculum that is equivalent to a Tier I intervention. It is designed to address all elementary school students' social and emotional skills and uses the Affective-Behavioral-Cognitive-Dynamic theoretical model of development to guide the curriculum. The basic premise of the Affective-Behavioral-Cognitive- Dynamic theoretical model is that the manner in which a child manages a situation or regulates

emotions is a reflection of his or her combined emotional awareness, affective-cognitive control, and social-cognitive understanding (Greenberg & Kusché, 1993). It is through the appropriate development and integration of language, thought, emotion, and action that children establish the necessary coping skills to guide his or her social functioning (Greenberg & Kusché, 1993).

This systematic developmental approach encompasses the foundation of the PATHS curriculum and targets the following five domains: self-control, emotional understanding, positive self-esteem, relationships, and interpersonal skills. Each of these five domains is incorporated into lessons. The regular education teacher is typically responsible for implementing lessons two to three times per week for approximately 30 minutes. Each lesson increases in difficulty and builds on concepts learned in previous lessons. By providing instruction in these five areas, students are provided with the coping skills to more effectively express emotions, control emotions, resolve conflicts, and increase social competency (Greenberg & Kusché, 1993).

Current Study

The current study's researcher consulted with a rural school system in western Virginia. The school system began implementing RTI to address the social-emotional domain in the 2010/2011 school year. During the school system's first year of implementation they utilized the Devereux Elementary Student Strength Assessment (DESSA) and DESSA-mini to screen and identify students in Kindergarten through Third who may need additional social-emotional interventions. The PATHS was used as a universal screener for grades fourth through seventh. Research conducted on the implementation of the DESSA and DESSA-mini in the 2010/2011 school year revealed a weak teacher buy-in regarding the usefulness of the DESSA and DESSA-mini (Bostwick, 2011). Less than 80% of teachers reported being on-board with utilizing the DESSA and DESSA-mini (Bostwick, 2011). A possible explanation for the low level of buy-in was thought to be associated with teachers' general lack of understanding about the application of the ratings and interventions (Bostwick, 2011).

Given the lack of connection between the DESSA-mini screener and interventions, as well as, the weak teacher buy-in, the school system decided to use the PATHS for screening and intervention implementation. Upon a review of school system's new method for implementing RTI to address the social-emotional domain for the 2011/2012 school year, a specific limitation was identified that was consistent with shortcomings in past research. More specifically, the school system planned to utilize a universal screening method that was not empirically supported. To identify students, the school system decided to use a method in which students who received a rating of "4" or "5" on the PATHS Student Evaluation were determined to be at-risk and considered for

Tier 2 or 3 interventions. With this method, a student who received a rating of “4” or “5” on the PATHS was determined to possess more social-emotional concerns that warranted additional interventions to target the student’s behavioral difficulty. Although this provided a semi-standard method for identification, the cut-off point of receiving a “4” or “5” on any item was not supported by research. Furthermore, the PATHS Student Evaluation that is included as part of the PATHS curriculum is intended to measure curriculum effectiveness rather than to identify students who may be at-risk prior to implementing the curriculum.

To address shortcomings of past research and the needs of a public school system implementing RTI using the PATHS curriculum, the current study investigated the area of universal screening to provide a more accurate and standardized system of identifying at-risk students. The current study focused on the effectiveness of utilizing the PATHS Student Evaluation to identify students with social-emotional concerns who may need additional interventions at the Tier 2 and 3 levels. More specifically, the current study evaluated the validity and overall sensitivity of the PATHS Student Evaluation for identifying at-risk students.

Hypotheses

Various hypotheses were formulated when investigating the effectiveness of the PATHS Student evaluation for identifying students who may be at-risk for social-emotional concerns. It was predicted that students who were referred to the office would have a significantly greater concentration of ratings of 4 and 5 on the Student Evaluation compared to those student who were not referred to the office. Therefore, the distribution of PATHS ratings for students referred to the office will be different from the distribution

for students with no office referrals. It was also expected that students with lower GPAs would have a greater percentage of ratings of 4 and 5. Therefore, the distribution of PATHS ratings for students with low GPAs will be different from the distribution for students with high GPAs. Furthermore, it is predicted that students with high absentee rates will have a greater percentage of ratings of 4 and 5. Therefore, the distribution of PATHS ratings for students with a high rate of absenteeism will be different from the distribution for students with a low rate of absenteeism. Finally, in order to investigate a possible relationship between the three subtests of the PATHS evaluation, aggression/disruptive behavior, concentration/attention, and social and emotional competence, an exploratory correlation analysis was conducted.

Methods

Participants and Setting

Participants in the current study were first through fifth grade students ($N = 144$) and teachers ($N = 10$) from a small elementary school in western Virginia during the 2011/2012 school year. Each grade included in the study consisted of two classes with the following total number of students for each grade: First Grade ($n = 26$, Second Grade $n = 26$, Third Grade $n = 30$, Fourth Grade $n = 27$, Fifth Grade $n = 25$). The school system is a small rural public system located in the mountains of western Virginia and consists of two elementary schools and one high school. The elementary school chosen for the current study is the larger of the two elementary schools with an enrollment of approximately 225 students in kindergarten through seventh grade.

The rural school system is also one of Virginia's pilot locations for implementing RTI to address the academic and social-emotional domains. The 2011/2012 school year

was the system's second year implementing RTI for addressing the social-emotional domain utilizing the PATHS curriculum. However, this was the first year in which the PATHS curriculum was implemented to all elementary school grades. Last school year it was limited to fourth through seventh grade.

Measures

Behavioral Data. The elementary school's guidance counselor obtained student behavioral data from the school system's computer database. The office disciplinary referral data included an accumulation of students' office disciplinary referrals during the first grading period (August 24 – October 28). Students' attendance and report cards were also from the first grading period (August 24 – October 28).

PATHS Student Evaluation. (Kusché & Greenberg, 2005). The success of the PATHS program was evaluated through the PATHS Student Evaluation, which is a standardized evaluation form completed by the general classroom teacher to determine student progress over the school year. The evaluation form consists of 30 individual behaviors covering the following three behavioral areas: aggression/disruptive behavior, concentration/attention, and social and emotional competence. Each behavior is rated using a 6-point scale (0 = never/almost never to 5 = almost always) to indicate the frequency at which a student engages in the specific behavior compared to other students of the same grade level and gender. Teachers rated each individual student on 30 different behaviors before implementing the PATHS curriculum and then again following the completion of the curriculum. An average score was calculated for each of the three behavioral areas that are rated and then the two average ratings are used to determine changes in behavior. Higher scores on the aggression/disruptive domain indicate more

social-emotional concerns, and higher scores on the social and emotional competence and concentration/attention domains indicate positive behaviors. The first ratings before implementing the PATHS curriculum were utilized; therefore, the PATHS Student Evaluation was used for screening purposes as opposed to measuring overall behavioral change.

Procedures

Teachers completed a PATHS Student Evaluation for each student in their class in October of the 2011/2012 school year. The evaluations were completed prior to implementing the PATHS curriculum for that school year. After the teachers completed the evaluations, the guidance counselor collected the evaluations and removed the students' identifying information. Furthermore, the ratings for the social and emotional competence and concentration/attention subscales were reversed coded because they are strength based scales. Therefore, a rating of 5 on the concentration/attention and the social and emotional subscale was changed to be equivalent to "Never or Almost Never" and a rating of 0 was equivalent to "Almost Always." For example, an item from the attention/concentration subscale, "Works through distractions," that was rated a 5 would indicate that a student "Never or Almost Never" engages in this behavior. An item from the social and emotional competence subscale that was rated 0, "Listens carefully to others," would indicate that a student "Almost Always" listens carefully to others. Each student's average score for the three individual subtests was also reported. After removing the students' identifying information and reverse coding the attention/concentration and the social and emotional competence subscales, the students'

evaluations, report cards, number of office referrals, and attendance rates were emailed to the current study's researcher.

Upon receiving data, the researcher organized the PATHS Evaluations by placing students into one of four categories. The following was the criteria for categorization: Group 1 = no score on any item of scale higher than a 1, Group 2 = at least one item was scored a 2, none higher, Group 3 = at least one item was scored a 3, none higher, Group 4 = at least one item was scored a 4 or 5. Students who received a rating of 4 or 5 were compiled into one group because there were a limited number of students in these groups. The groups were on a continuum, so that Group 1 contained students with the least social-emotional concerns and Group 4 consisted of students with the most social-emotional concerns. Therefore, students in Group 4 possessed the highest ratings indicating the greatest social-emotional concerns.

After categorizing each student into one of the four groups, the absences and office disciplinary referrals were transformed into a dichotomous variable to allow for the comparison of the distributions. Office disciplinary referrals were divided into "No Office Disciplinary Referrals" and "Referred to the Office." Therefore, students who had at least one office disciplinary referral were placed into the "Referred to Office" group and those with no referrals were in the "No Office Disciplinary Referrals" group. For absences, students were placed into "Low Absences" and "High Absences." Students who missed no more than one day of school were placed in the "Low Absences" group and those who missed two or more days of school were placed into the "High Absences" group. Students' grades were also transformed into a GPA scale for analysis. The following National Assessment for Educational Progress (NAEP) 4.0 grading scale was

utilized to calculate grade point average for students: A = 4.0, B = 3.0, C = 2.0, D = 1.0, F = 0.0 (National Assessment of Educational Progress, 2009). First grade students were excluded from the Chi-Square analysis for GPA, as the grading system was not comparable to the other grades. The researcher utilized the school system's grading system to determine the letter grade and then transformed the letter grade to a GPA scale. Each student's GPA was composed of his or her grades in Math, Language Arts, and Reading. These are the core academic areas and were consistently reported across second, third, fourth, and fifth grade. High GPAs were considered to be 2.6 or higher, as 2.6 corresponds with the letter grade B-. Chi-Square analyses were conducted for each of the individual behavioral variables: Office Disciplinary Referrals, Absences, and GPA.

Analysis/Results

The current study consisted of 144 participants in first through fifth grade at a rural elementary school in western Virginia. Statistical analyses were conducted using the compiled data from the students' PATHS Student Evaluations, report cards, office disciplinary referrals, and attendance. Multiple Chi-square analyses were conducted to address the overarching research question as to whether the PATHS Student Evaluation is a valid universal screener for identifying students who may be at-risk for social-emotional concerns. Correlation exploratory analyses investigating the possible relationships between the three subscales of the PATHS evaluation, aggression/disruptive behavior, concentration/attention, and social and emotional competence were also conducted.

The hypothesis that the distribution of PATHS ratings for students who were referred to the office will be different from students with no office referrals was supported, $X^2(144) = 38.79, p = .001$. Of the students who possessed an office disciplinary referral, 75% were in Group 4, while only 14% of those with no office disciplinary referrals were in Group 4. A Cramer's V test was utilized to investigate the effect size of the relationship between office disciplinary referrals and PATHS Student Evaluation ratings. A Cramer's V was used because the Chi-Square contingency table was greater than a 2x2 (Cramer, 1946). According to Rea & Parker (1992) the following are the conventions for determining the magnitude of the Cramer's V associations: a negligible association = .00 to .10, a weak association = .10 to .20, a moderate association = .20 to .40, a relatively strong association is between .40 and .60, a strong association = .60 to .80, and a very strong association = .80 to 1.00. The Cramer's V test revealed a

relatively strong association between a student receiving an office disciplinary referral and their PATHS Student Evaluation ratings (Cramer's $V = .519$). As shown in Figure 1, students with no office disciplinary referrals were significantly more likely to receive lower ratings on the PATHS student evaluation than students who had been referred to the office.

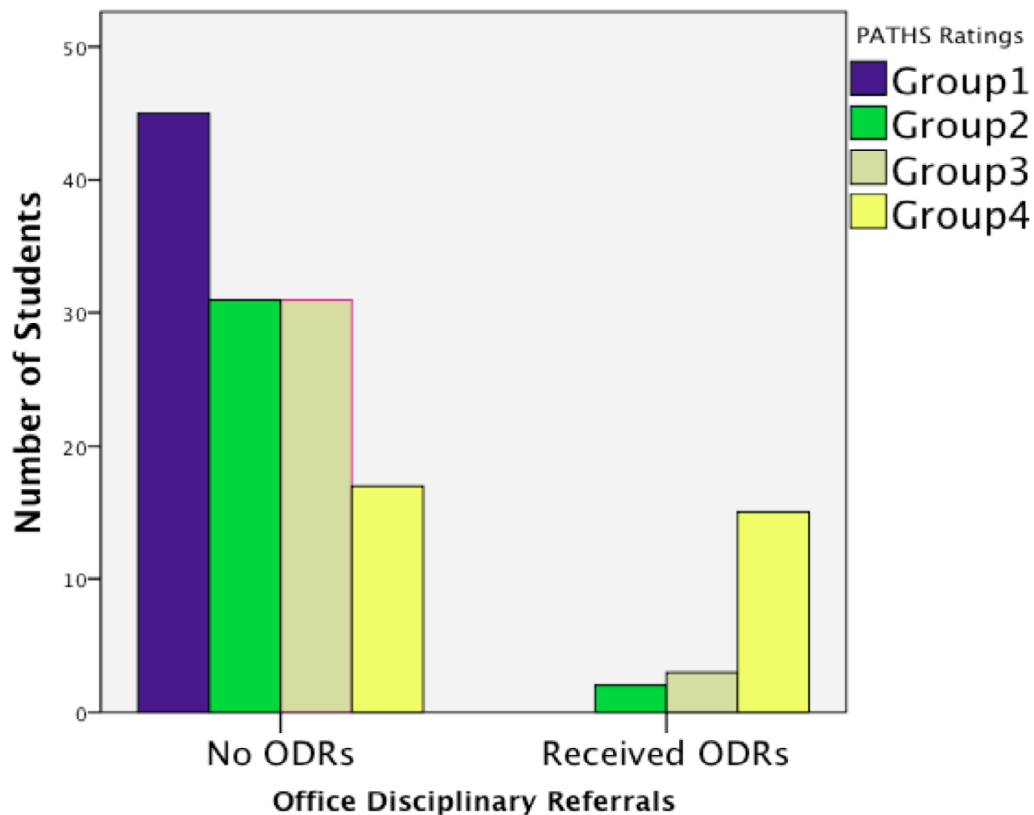


Figure 1. Office Disciplinary Referrals and Differences in PATHS Student Evaluation Ratings

In regards to GPA, the hypothesis that the distribution of PATHS Student Evaluation ratings for students with low grades will be different from the distribution for students with high grades was supported, $\chi^2 (118) = 33.75, p = .0001$. Of the students

with low GPAs, 50% were in Group 4, while only 11% of those with high GPAs were in Group 4. A Cramer's V test revealed a relatively strong relationship between a student's GPA and their PATHS Student Evaluation ratings (Cramer's $V = .546$). Figure 2 shows that students with lower GPAs were significantly more likely to receive higher ratings on the PATHS Student Evaluation and students with higher GPAs were significantly more likely to receive lower ratings.

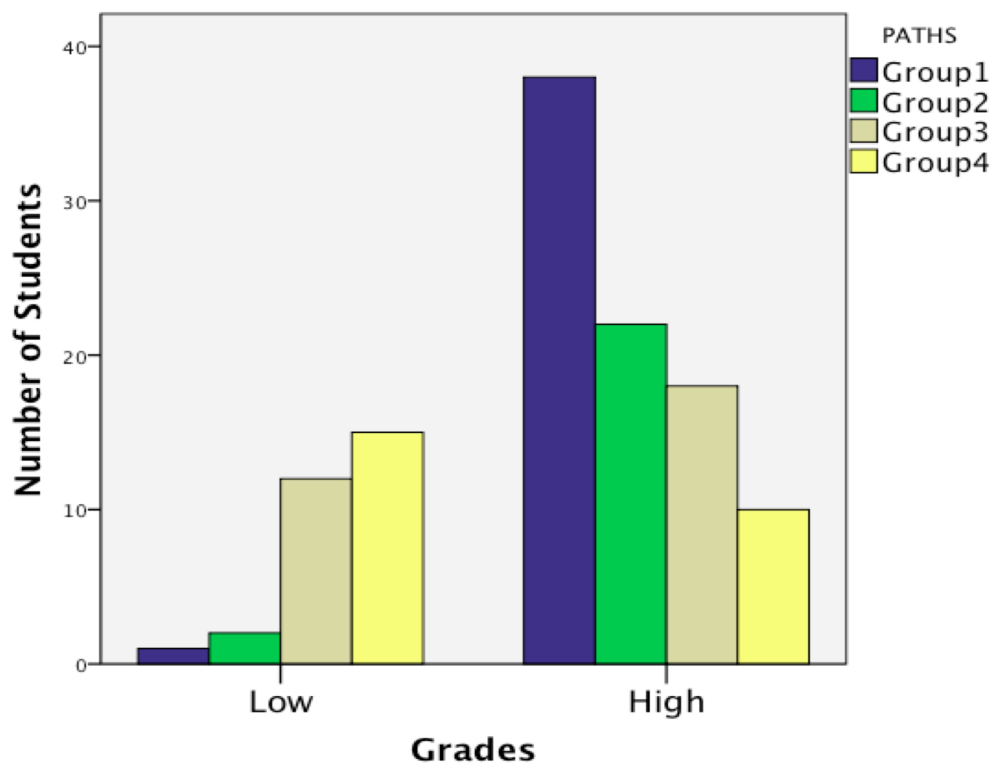


Figure 2. GPA and Differences in PATHS Student Evaluation Ratings

Finally, the hypothesis that the distribution of PATHS Student Evaluation ratings for students with a high rate of absenteeism will be different from the distribution for students with a low rate of absenteeism was not supported, $\chi^2 (144) = 7.14, p = .07$. The results were close to significance, but revealed no statistically significant relationship

between PATHS Student Evaluation ratings and students' attendance. In order to capture the impact of absenteeism on PATHS Student Evaluation ratings and social-emotional difficulties, attendance may need to be collected beyond the first grading period.

To investigate the relationship between the three subscales of the PATHS student evaluation three correlation analyses were completed. The PATHS Student Evaluation average subscale ratings for aggression/disruptive were correlated with the average ratings for the attention/concentration subscale. The two subscales were significantly correlated, indicating that students who received higher average ratings on the aggression/disruptive subscales tended to have higher ratings on the attention/concentration subscale, $r(144) = .68, p = .001$. Therefore, students who reportedly demonstrate more aggressive/disruptive behaviors reportedly exhibit less attention/concentration abilities.

The PATHS Student Evaluation ratings for the aggression/disruptive subscale were also correlated with the average ratings for the social and emotional competence subscale. The two subscales were significantly correlated, indicating that students who received higher average ratings on the aggression/disruptive subscale tended to have higher ratings on the social and emotional subscale, $r(144) = .84, p = .001$. Therefore, students who reportedly demonstrate more aggressive/disruptive behaviors likely exhibit less social and emotional competence.

Finally, The PATHS Student Evaluation ratings for the attention/concentration subscale were correlated with the average rating for the social and emotional competence subscale. The two subscales were significantly correlated, indicating that students who received higher average ratings on the attention/concentration subscales tended to have

higher ratings on the social and emotional subscale, $r(144) = .72, p = .001$. Therefore, students with reportedly higher social and emotional competence tend to exhibit more attention/concentration abilities.

Discussion

The current study investigated the validity of using the PATHS Student Evaluation as a universal screener for identifying students with significant social-emotional concerns through a RTI system. Overall, results provide validity support that the PATHS Student Evaluation effectively identifies students who may need additional supports/interventions in the social-emotional domain. Specifically, individuals who received office disciplinary referrals were more likely to receive higher ratings on the PATHS Student Evaluation, which corresponds with more social-emotional concerns. Research consistently supports the use of office disciplinary referrals to indicate responsive to universal social-emotional interventions (Pavri, 2010; Pearce, 2009). Therefore, the current study's findings regarding office disciplinary referrals and higher PATHS Student Evaluation ratings supports the utilization of the PATHS Student Evaluation as an instrument to identify unresponsiveness to universal interventions and greater social-emotional needs. In addition to supporting the validity of the PATHS Student Evaluation, findings also provides additional support for past research's use of office disciplinary referrals as an indicator of greater social-emotional concerns.

An additional finding of the current study revealed that students who received lower grades were more likely to receive higher ratings on the PATHS Student Evaluation, indicating greater social-emotional concerns. As with office disciplinary referrals, past research supports this finding and associates academic performance with social-emotional competency. Specifically, students who lack social-emotional competency may be less likely to succeed in school (Zins et al., 2004). Although not as widely used to determine responsiveness to social-emotional interventions, students'

academic performance is utilized to demonstrate effectiveness of social-emotional programs and to support the importance of addressing the social-emotional domain in the classroom (Synder et al., 2010). Therefore, the current study's finding that a student's grades relates to their ratings on the PATHS Student Evaluation also provides further support for past research's use of academic performance to determine program effectiveness.

A student's rate of absenteeism was not found to be associated with ratings on the PATHS Student Evaluation. A possible explanation for the insignificant finding may relate to trends in past research that utilize absenteeism as an outcome variable when demonstrating the relationship between absenteeism and social-emotional competency, (Synder et al., 2010). Therefore, the current study's finding and past research suggest that absenteeism may not be a valid indicator of social-emotional concerns, but instead may relate more to long-term program effectiveness. A further explanation for the lack of significant findings may relate to the time of year that the data was collected and the exclusion of students' tardy slips. Given that the data was collected two months into school it is possible that absenteeism may not have yet impacted student social-emotional competency. Furthermore, numerous students possessed a significant number of tardies; however, the amount of time missed because of the tardy was not provided. Therefore, a student could have missed a significant portion of the school day, which may have been similar to an absence.

In addition to investigating the validity of the PATHS Student Evaluation, an exploratory analysis was conducted in order to gain a better understanding of the relationship between the three subscales of the evaluation tool and to contribute to future

research addressing the social-emotional domain. The subscale aggression/disruptive behavior was found to be positively correlated with both the concentration/attention and the social emotional competence subscales. The concentration/attention and social and emotional competence subscales are strength based whereas the aggression/disruptive subscale is not. As described by CASEL (2007), an individual who is socially and emotionally competent has the ability to recognize and manage emotions, establish positive relationships, make responsible decisions, and effectively manage difficult situations. Therefore, an individual who possess these skills is more likely equipped to manage situations effectively without using aggressive or disruptive behaviors. This is consistent with the current study's finding that students who were rated as demonstrating more social and emotional competence were less likely to exhibit aggressive/disruptive behaviors.

In regards to the relationship found between the aggressive/disruptive behavior subscale and the concentration/attention subscale, this finding is also consistent with past research that suggests students who receive a social-emotional intervention are more likely to pay attention and maintain focus and are less likely to engage in disruptive behaviors (Snyder et al., 2010). Furthermore, Snyder et al. (2010) revealed that with an increase in these positive behaviors, academic achievement would likely be positively impacted because less time is devoted to disciplining and redirecting disruptive behaviors in the classroom.

Another positive correlation was found between the concentration/attention and social and emotional competence subscales, which is supported by past trends in research. Specifically, social emotional competence has been demonstrated to positively

impact student engagement and interest in school (CASEL, 2007). Furthermore, a socially and emotionally competent student is more likely to be active and attentive when receiving instruction in a classroom setting (Malecki & Elliot, 2002).

Numerous significant findings were revealed that would help to guide the utilization of the PATHS Student Evaluation as a universal screener and contribute to research on RTI for the social-emotional domain. However, aside from the significant findings, it is important to discuss the current study's limitations. To begin, the elementary school is small and within a small rural school system; therefore, the results may not be able to be generalized to larger and/or urban school systems. A further limitation related to the sample, was the disproportionate number of Caucasian students, which is not representative of the general population. This also contributes to the limitations of the results to be generalized to other school systems. Another limitation was the small representation of students in Groups 3 and 4. To address the unequal distribution of students in the PATHS Student Evaluation groups, the groups were consolidated to a total of four groups instead of five as originally planned.

Based on the current study's focus and findings, future research is needed to provide additional information and support for utilizing the PATHS Student Evaluation as a universal screener. The current study's findings supported its use based on utilizing a specific criterion to identify students; however, research further supporting the application of this criterion would be beneficial. Furthermore, future research focusing on how much more variance can be explained by the screener beyond the behavioral data may provide additional support for the use of the PATHS Student Evaluation. For example, it would be beneficial to investigate how much more variance is accounted for

by the PATHS Student Evaluation when grades and/or office disciplinary referrals are controlled. By further investigating the additional variance that may be accounted for by the PATHS Student Evaluation, school systems may be more likely to utilize the screener instead of solely relying on behavioral data to identify students who are at-risk for social-emotional concerns.

In addition to conducting further research on the validity of the PATHS Student Evaluation, more research investigating the individual subscales that compose the PATHS Student Evaluation may be beneficial. Specifically, it may be beneficial for future studies to examine individual student's ratings on the subscales to determine if certain subscales contribute more or less to social-emotional concerns/competency. Furthermore, it may be beneficial to investigate whether certain traits included in the subscales serve as protective or resiliency factors.

In general, the application of RTI to address the social-emotional domain is an area that needs further investigation. Specifically, it is essential that future studies focus on establishing a general structure and guidelines for implementing RTI. By providing additional information about how to identify at-risk students and determine responsiveness to interventions, school systems may be more inclined to implement RTI to address the social-emotional domain.

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